

Postdoctoral Fellow –Study of iron homeostasis in *Pseudomonas aeruginosa*

Bacterial Membrane Transport, ESBS, Strasbourg, France.

The group “**Bacterial Membrane Transport**” at the ESBS (Ecole Supérieure de Biotechnologie de Strasbourg, University of Strasbourg-CNRS) and **Roche (Basel, Switzerland)** are partners for this postdoctoral position. The team “Bacterial Membrane Transport” brings together biochemists, molecular biologists, microbiologists and organic chemists. The combination of these different skills allows them to use a multidisciplinary approach to study iron homeostasis in the human opportunist *Pseudomonas aeruginosa*. The group’s goal is to discover new antibiotics and therapeutic strategies by understanding and targeting the bacterial iron uptake pathways in *P. aeruginosa*.

A postdoctoral fellow position is available immediately for a highly motivated scientists in *Pseudomonas aeruginosa* in the team of Dr I. Schalk (“Bacterial Membrane Transport”, <http://irebs.u-strasbg.fr/spip.php?rubrique64&lang=en>). Candidates must hold a doctoral degree with solid background in one of the following areas; membrane protein biochemistry, molecular biology, cellular biology, bacterial physiology and/or bioinorganic chemistry. As a Roche Postdoctoral Fellow performing research in the laboratory of Dr Isabelle Schalk located at the University of Strasbourg (France), the candidate will focus on the structural study of a inner membrane transporter involved in iron acquisition in *P. aeruginosa* and test the ability of different molecules produced by Roche to transport iron and to have an antibiotic activity.

This project involves:

- Characterization of iron chelators and antibiotics-chelators conjugates in terms of ability to transport ^{55}Fe in bacteria and biological activity.
- Investigation of structure-activity relationships between conjugate properties and the bacterial outer and inner membrane transporters.
- Cloning, over-expression, purification, crystalization and ultimately solving the structure of an inner membrane protein involved in iron homeostasis in *P. aeruginosa*.

This position is initially limited to two years; the first 18 months will be based at the University of Strasbourg while the concluding 6 months may be either in Strasbourg (France) or at the Roche site in Basel (Switzerland).

Candidates must hold a PhD in biochemistry, structural biology, molecular biology or microbiology; preferably with a focus on bacterial membrane proteins, and must be proactive, goal-oriented, well-organized and you are able to solve problems creatively and independently.

Applications must contain a CV with publication list and motivation letter send to Dr I. Schalk (isabelle.schalk@unistra.fr)